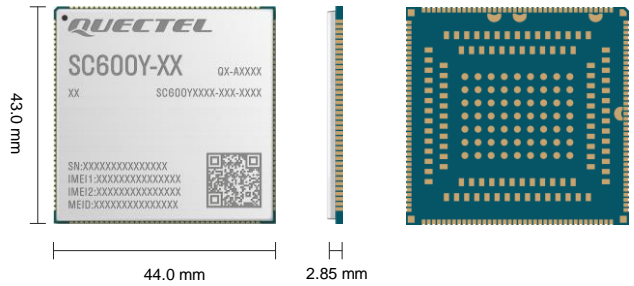


Quectel SC600Y Series

Multi-mode Smart LTE Module with Wi-Fi & Bluetooth



SC600Y series is Quectel’s new generation of multi-mode Smart LTE Cat 6 module with built-in Android OS. Based on Qualcomm SDM450 64-bit high-performance octa-core processors with built-in Adreno™ 506 GPU, the module is designed to support high performance, various multimedia features and Quick Charge 3.0 technology. It is ideal for both industrial and consumer applications with high data-rate and multimedia functions. SC600Y series comes in four variants: SC600Y-EM, SC600Y-NA, SC600Y-JP and Wi-Fi & Bluetooth only version SC600Y-WF.

SC600Y series supports multiple-input multiple-output (MIMO) technology. The use of multiple antennas at the receiver end on the same frequency band greatly minimizes errors and improves the data speed. This module also combines high-speed wireless connectivity with embedded multi-constellation and high-sensitivity GNSS (GPS, GLONASS, BDS, Galileo) receiver for positioning.

A rich set of interfaces (such as LCM, Camera, Touch Panel, MIC, UART, USB, I2C, SPI) extend the applicability of the module for a wide range of M2M applications, including smart POS, smart cash registers, smart home gateways, smart robots, smart wearables, smart safety, PDA & tablets, vending machines, delivery lockers, audio and video recorders, as well as video streaming and entertainment systems.



Key Features

- ✓ LTE Cat 6 modem supporting 2 × 20 MHz carrier aggregation, with maximum download speed up to 300 Mbps
- ✓ Worldwide LTE, UMTS/HSPA+ and GSM/GPRS/EDGE coverage
- ✓ Dual LCDs and dual touch panels for independent display and operation: 1920 × 1200 @ 60 fps for primary display and 1920 × 1080 @ 60 fps for secondary display
- ✓ Maximum of four cameras, and supports two cameras working simultaneously
- ✓ Multi-constellation GNSS receiver for applications requiring fast and accurate fixes in any environment
- ✓ Recording and playback of 1080P videos at 60 fps



ARM Cortex-A53
64-bit Processor
(Octa-core)



Qualcomm®
Adreno™ 506 GPU



Android OS



Smart LTE Cat 6
Max. 300 Mbps (DL)
Max. 50 Mbps (UL)



IEEE 802.11
a/b/g/n/ac



Bluetooth 4.2
(BR/EDR + BLE)



GPS/GLONASS/
BDS/Galileo



Powerful Multimedia
Function



LGA + LGA
Package

Quectel SC600Y Series

LTE Cat 6	SC600Y-EM	SC600Y-NA	SC600Y-JP	SC600Y-WF
Region/Operator	EMEA/India/Korea/South Asia/ Latin America/Australia/ New Zealand/South Africa	North America	Japan	Global
CPU	SDM450, Octa-core ARM Cortex-A53 64-bit CPU @ 1.8 GHz	SDM450, Octa-core ARM Cortex-A53 64-bit CPU @ 1.8 GHz	SDM450, Octa-core ARM Cortex-A53 64-bit CPU @ 1.8 GHz	SDM450, Octa-core ARM Cortex-A53 64-bit CPU @ 1.8 GHz
Memory	16 GB eMMC + 2 GB LPDDR3 (Default) 32 GB eMMC + 3 GB LPDDR3 (Optional)	16 GB eMMC + 2 GB LPDDR3 (Default) 32 GB eMMC + 3 GB LPDDR3 (Optional)	16 GB eMMC + 2 GB LPDDR3 (Default) 32 GB eMMC + 3 GB LPDDR3 (Optional)	16 GB eMMC + 2 GB LPDDR3 (Default) 32 GB eMMC + 3 GB LPDDR3 (Optional)
OS	Android 9/10	Android 9/10	Android 9/10	Android 9/10
Dimensions (mm)	43.0 × 44.0 × 2.85	43.0 × 44.0 × 2.85	43.0 × 44.0 × 2.85	43.0 × 44.0 × 2.85
Package	LCC + LGA	LCC + LGA	LCC + LGA	LCC + LGA
Weight (g)	Approx. 13.0	Approx. 13.0	Approx. 13.0	Approx. 13.0
Temperature Range				
Operating Temperature	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C	-35 °C to +75 °C
Frequency Bands				
LTE-FDD	B1/B2/B3/B4/B5/B7/B8/B20/B28	B2/B4/B5/B7/B12/B13/B14/B17/ B25/B26/B66/B71	B1/B3/B5/B8/B11/B18/B19/ B21/B26/B28	-
LTE-TDD	B38/B39/B40/B41	B41	B41	-
WCDMA	B1/B2/B4/B5/B8	B2/B4/B5	B1/B6/B8/B19	-
GSM/EDGE	850/900/1800/1900 MHz	-	-	-
WLAN	2.4&5 GHz 802.11a/b/g/n/ac	2.4&5 GHz 802.11a/b/g/n/ac	2.4&5 GHz 802.11a/b/g/n/ac	2.4&5 GHz 802.11a/b/g/n/ac
Bluetooth	Bluetooth 2.1 EDR/3.0 HS/4.2 LE	Bluetooth 2.1 EDR/3.0 HS/4.2 LE	Bluetooth 2.1 EDR/3.0 HS/4.2 LE	Bluetooth 2.1 EDR/3.0 HS/4.2 LE
GNSS	GPS/BDS/GLONASS or GPS/BDS/Galileo	GPS/BDS/GLONASS or GPS/BDS/Galileo	GPS/BDS/GLONASS or GPS/BDS/Galileo	-
Certifications				
Carrier	Australia: Telstra	America: Verizon/AT&T/ T-Mobile/Sprint	Japan: NTT DOCOMO/KDDI	-
Regulatory	Global: GCF Europe: CE UK: UKCA Brazil: Anatel South Korea: KC Taiwan, China: NCC Australia/New Zealand: RCM	Global: GCF North America: PTCRB America: FCC Canada: IC Mexico: IFETEL	Japan: JATE/TELEC	Europe: CE America: FCC UK: UKCA Canada: IC South Korea: KC Japan: JATE/TELEC Australia/New Zealand: RCM
Others	RoHS/REACH	RoHS/REACH	RoHS/REACH	RoHS/REACH
Data Rate				
LTE-FDD (Mbps)	300 (DL)/ 50 (UL)	300 (DL)/ 50 (UL)	300 (DL)/ 50 (UL)	-
LTE-TDD (Mbps)	265 (DL)/ 30 (UL)	265 (DL)/ 30 (UL)	265 (DL)/ 30 (UL)	-
DC-HSPA+ (Mbps)	42 (DL)/ 5.76 (UL)	42 (DL)/ 5.76 (UL)	42 (DL)/ 5.76 (UL)	-
WCDMA (kbps)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)	384 (DL)/ 384 (UL)	-
EDGE (kbps)	296 (DL)/ 236.8 (UL)	-	-	-
GPRS (kbps)	107 (DL)/ 85.6 (UL)	-	-	-
Enhanced Features				
3GPP E-UTRA	Release 10	Release 10	Release 10	-
Bandwidth	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	1.4/3/5/10/15/20 MHz	-
Battery Management	Built-in Charger IC & Fuel Gauge, Qualcomm Quick Charge 3.0	Built-in Charger IC & Fuel Gauge, Qualcomm Quick Charge 3.0	Built-in Charger IC & Fuel Gauge, Qualcomm Quick Charge 3.0	Built-in Charger IC & Fuel Gauge, Qualcomm Quick Charge 3.0
Rx-diversity	●	●	●	-
DL MIMO 2 × 2	●	●	●	-
(U)SIM Detection	●	●	●	-
Dual SIM Dual Standby	●	●	●	-
Firmware Upgrade via USB	●	●	●	●
Firmware Upgrade via OTA	●	●	●	●

NOTE:

- *: planning.
- : supported.

Quectel SC600Y Series

LTE Cat 6		General Features of SC600Y Series	
Interfaces			
LCM		Supports dual LCDs for independent display: 2 groups of 4-lane MIPI_DSI; WUXGA (1920 × 1200) @ 60 fps for primary display and FHD (1920 × 1080) @ 60 fps for secondary display 3 groups of 4-lane MIPI_CSI, up to 2.1 Gbps per lane	
Camera		Supports three cameras (4-lane + 4-lane + 4-lane) or four cameras (4-lane + 4-lane + 2-lane + 1-lane) Up to 21 MP with dual ISPs	
Touch Panel		× 2, Capacitive-screen, I2C controls	
Audio		3 analog inputs: MIC1, MIC2, MIC3 (including one noise-canceling MIC) 3 analog outputs: speaker, earpiece, headphone	
USB		× 1, USB 3.0 and 2.0 compliant, Type-C, USB OTG + charge	
(U)SIM		× 2, supports 1.8/2.95 V (U)SIM cards, with (U)SIM card detection function, DSDS supported	
UART		× 3, up to 4 Mbps, UART5 supports hardware flow control	
SD Card		× 1, SD 3.0, supports 4-bit SDIO	
ADC		× 2, general-purpose ADC interface	
I2C		× 5	
SPI		× 2	
PWRKEY		Pulled up internally to 1.8 V	
GPIO		× 17	
Antenna		× 4, Main/Rx-diversity/GNSS/Wi-Fi & Bluetooth antenna interface respectively (SC600Y-WF: × 1, Wi-Fi & Bluetooth antenna interface)	
Electrical Features			
Supply Voltage Range		3.55–4.4 V, typ. 3.8 V	
Power Consumption		80 μA @ power off, typ. 3.6 mA @ sleep mode	